U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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PRECIOUS METALS IN JULY 1996

Domestic:

U.S. mines produced 26,300 kilograms of gold and 127,000 kilograms of silver in July.

Engineering and Mining Journal (E&MJ), reported in its July issue that the Summitville Consolidated Mining Co., Inc. had pled guilty to 40 counts of violating the Clean Water Act and other statutes during open-pit gold mining operations conducted from 1984 to 1992. To date, the U.S. Environmental Protection Agency reportedly had spent more than \$120 million in cleanup efforts at the Summitville mine site in the San Juan Mountains of southwestern Colorado.

Skillings Mining Review reported on July 6 that USMX Inc., Lakewood, CO, had entered into an agreement to sell the net profits royalty interest in the Montana Tunnels gold mine to Pegasus Gold Inc., Spokane, WA, for \$4.5 million. Pegasus, USMX's largest stockholder, is the owner and operator of the mine, which had been transferred by USMX to Pegasus in 1987. Pegasus reportedly had advanced the \$4.5 million to USMX in the form of a 4-year term loan secured by the royalty interest; it will be credited against the purchase price at closing.

Platt's Metals Week reported on July 8 that the U.S. Department of Energy (DOE), through Lockheed Martin Energy Systems Inc., had solicited bids for the sale of 18.5 kilograms (595 troy ounces) of gold and 19.2 kilograms (617 ounces) of silver, but had rejected all bids as being too low. DOE reportedly was seeking bids at 97% of the current market price for gold and silver, but received bids for only 89-94% of the market price.

On July 18, USMX, Inc., Lakewood, CO, announced that it had received an exclusive exploration permit covering 5,420 hectares (13,380 acres) in the Ophir mining district in west central Alaska.

On July 23, American Metal Market reported that Battle Mountain Gold Co., Houston, TX, and Hemlo Gold Mines, Inc., Toronto, ON, had completed their planned merger on July 19 (See Update section of Precious Metals MIS, January 1996). The new company, Battle Mountain Gold, reportedly will have operating mines in five countries on three continents and will be the 12th-largest gold producer in the world.

Hecla Mining Co., Coeur d'Alene, ID, announced on July 29 that the Greens Creek Mine, on Admiralty Island, near Juneau, Alaska, had restarted operations ahead of schedule. Grinding and flotation circuits at the silver/zinc/lead/gold mine were started the week of July 22, well ahead of the original schedule, which had called for the mine to restart operations in the first quarter of 1997. Greens Creek is a joint venture between Kennecott Greens Creek Mining Company (70.3%) and Hecla (29.7%).

International:

The third quarter CIS Metals Review, published by CRU International, of London, reported that at Bakyrchik Gold in Kazakstan, Davy International was working on a feasibility study for a 900,000-metric-ton-per-year roasting facility and gold extraction plant, capable of recovering 7.8 tons (250,000 ounces) of gold annually.

It was announced in the July issue of *E&MJ* that Amax Gold's Kubaka gold mining project in Russia's Far East was projected to start commercial production in the first quarter of 1997. The delayed commissioning, increased project costs, and some design modifications reportedly would result in a capital expenditure overrun of about \$46 million over the original \$182 million budgeted for the project.

Metal Bulletin Monthly (MBM) reported in its July issue that Yukon Gold Corp., in conjunction with Zinton Investments Ltd., had purchased an 80% interest in the Buduk gold property in Indonesia's West Kalimantan Province. Yukon Gold reportedly had also entered into an agreement with Zinton to acquire a 90% interest in the Sebakan and Bawani properties. All of these properties are located within the Central Kalimantan Arc, a region currently undergoing intense exploration for gold.

Metal Bulletin, in its July 1 issue, stated that Toronto-based Caledonia Mining Corp. had announced plans to develop Scotland's first commercial gold mine in the West Central Highlands of Scotland. The mine, located near Tyndrum, reportedly would have an annual production of about 778 kilograms (25,000 ounces) of gold.

American Metal Market indicated on July 3 that Brazil's large integrated mining enterprise, Cia. Vale do Rio Doce (CVRD), had opened two new gold mines that should boost the company's gold production to 18 tons (579,000 ounces) in 1996. CVRD commissioned the 1-ton (32,200-ounce)-peryear Almas gold mine, its sixth, in the northern Brazilian State of Tocantins and the 900-kilogram (28,900-ounce)-per-year Caeté gold mine, its seventh, in the east-central State of Minas Gerais.

The July 5 issue of *Mining Journal* reported that Australia's Goldfields Ltd., a subsidiary of Renison Goldfields Consolidated, officially opened the Henty gold mine near Queenstown, in Tasmania. The 2.8-ton (90,000-ounce)-per-year underground gold mine reportedly was the first commercial gold mining operation to open in the State in this century.

In addition, the July 5th *Mining Journal* reported that about 75% of the construction work for the Sadiola Hill open-pit gold mine in western Mali had been completed at the 141-ton (4.5 million-ounce) gold deposit.

On July 6, Skillings Mining Review reported Homestake Mining Co., San Francisco, CA, had announced that its wholly-owned subsidiary, Homestake Canada Inc., Kerr McGee Corp., and the Maclab Group of Companies had granted Arauco Resources Corp. an exclusive option to negotiate a definitive agreement to purchase their collective interests in the Black River and George Lake gold

properties in the Northwest Territories of Canada.

Metal Bulletin, in its July 8 issue, stated that three relatively small Canadian companies, Manhattan Minerals Corp., Great Lakes Minerals and Santa Cruz Gold, had agreed to merge to form one business entity that would have the collective capacity within 2 years to produce 5.6 tons (180,000 ounces) of gold per year. The new enterprise will be known as Amalco and will be based in Vancouver, BC.

On July 10, Coeur d'Alene Mines Corp., Coeur d'Alene, ID, announced an approximately \$53 million write-down of its Golden Cross gold-silver mine in New Zealand, owing to increased costs related to remediation of ground movement that has impacted the operation's tailings impoundment area. Coeur also charged the mine's previous owner with having failed to make full disclosures regarding the project when Coeur bought the property in 1993.

Metal Bulletin reported on July 11 that a consortium including Canada's Teck Corp., Singapore-based First Dynasty Mines, and Kazakstan's Bakyrchik Gold had been selected by the Government of Kazakstan to explore and develop the 218-ton (7-million-ounce) Vasilkovskoye gold deposit (See Precious Metals MIS, September 1995).

The July 16 Washington Post reported that concern was mounting in Ghana regarding the tension between illegal gold miners known as galamsey and commercial mining companies. The Government of Ghana had reportedly responded to the increased unease between the galamsey and mining companies by strengthening security at the gold mines and granting more mineral concessions to individual miners.

American Metal Market indicated on July 17 that Gengold's proposal to merge three operating South African gold mines into Evander Gold Mines was expected to be presented for shareholder approval in early October. Also included in the Evander Gold Mines organization would be the currently idle Bracken Mine and three development properties, Poplar, Rolspruit, and Twistdraai.

On July 19, the South-East Asia Mining Letter reported that Bre-X Minerals Ltd., Calgary, AB, announced that an updated resource calculation completed by Kilborn SNC Lavalin had upgraded the estimated gold resources at the Busang gold project on the Indonesian island of Kalimantan to 1,460 tons (46.9 million ounces) of gold.

According to the July 25 issue of *American Metal Market*, Australia's Ross Mining NL, Sydney, NSW, had completed a bankable feasibility study at its Gold Ridge project in the Solomon Islands. The \$50 million (A\$63 million) project reportedly was

expected to produce approximately 3.1 tons (100,000 ounces) of gold annually over a 10-year mine life.

The July 30 issue of *American Metal Market* reported that Barrick Gold Corp., Toronto, ON, had submitted a bid of \$202 million for the Quicay gold deposit in Peru.

Update:

The August 27 issue of London's *Financial Times* reported that North America's large gold producers are increasingly turning to takeovers to increase their appeal with investors. This action reportedly is driven by the perception that the financial markets have placed a premium on mining companies whose gold reserves have kept expanding in recent years and that investors rate very highly the large gold mining groups that make up the top echelon of the gold industry.

On September 26, Toronto's *Globe and Mail* reported that 100 years after gold prospectors

swarmed to northern Canada's Klondike region, a resurgence of gold mining activity was occurring in what was called Yukon's second gold rush. Yukon's previous gold production had been based principally on small and large placer mining operations. The current increase in development activity reportedly was the result of mining companies launching a series of new hard rock gold mining projects.

The October 3 issue of *The Wall Street Journal* reported that with the International Monetary Fund (IMF) currently mulling a \$2 billion gold sale to help finance a \$50 billion crisis fund, a pall has fallen over precious metals stocks (See Update section of Precious Metals MIS, April 1996). Some analysts and investors reportedly see a possible golden lining to this current situation. They reportedly feel that the precious metals mining investment stocks may encounter a bit more downside movement as the IMF story unfolds, but at some point there will be a buying opportunity for investors.

Publications on the Internet:

Monthly, quarterly, and annual Minerals Information publications are now available through the World Wide Web (www). These publications include the Mineral Commodity Summaries, Minerals Yearbook, Mineral Industry Surveys, and Metal Industry Indicators. To access Minerals Information publications, visit the Minerals Information home page at http://minerals.er.usgs.gov/minerals.

${\bf TABLE~1}$ MINE PRODUCTION OF RECOVERABLE GOLD AND SILVER IN THE UNITED STATES, BY STATE 1/

(Kilograms)

	1995 p/										
States	1995 2/	July	August	September	October	November	December	Jan Dec.			
Gold:											
Arizona	1,920	223	259	255	231	235	233	2,780			
California	26,200	1,640	1,630	1,480	1,520	1,940	1,730	20,200			
Idaho	8,850	239	236	240	236	261	277	3,000			
Montana	12,400	1,200	1,390	1,230	1,420	1,350	894	13,600			
Nevada	213,000	18,600	18,100	18,700	19,000	20,200	19,900	222,000			
Other States 3/	58,000	4,720	5,340	4,630	4,160	3,850	4,310	51,500			
Total	320,000	26,700	26,900	26,500	26,600	27,800	27,300	313,000			
	1996 p/										
	January	February	March	April	May	June	July	Jan July			
Arizona	236	229	178	161	168 r/	117 r/	124	1,210			
California	2,320	2,150	2,420	2,460	2,380	2,420 r/	2,420	16,600			
Idaho	255	266	266	271 r/	284 r/	310 r/	309	1,960			
Montana	803	654	847	980	971	959	997	6,210			
Nevada	15,100	15,700	17,100	16,100	17,800	17,200 r/	18,400	117,000			
Other States 3/	4,230	3,900	4,440	4,260	4,070 r/	4,140 r/	4,000	29,000			
Total	23,000	22,900	25,300	24,200	25,700 r/	25,100 r/	26,300	172,000			
				1995 p	/						
	1995 2/	July	August	September	October	November	December	Jan Dec.			
Silver:											
Arizona	220,000	13,400	16,000	14,800	15,900	15,600	16,700	172,000			
California	12,700	998	978	888	996	1,220	1,200	12,100			
Idaho	182,000	15,200	17,000	15,000	14,900	12,400	12,700	161,000			
Missouri	W	3,650	4,130	3,050	2,380	3,120	3,040	45,400			
Montana	76,100	7,390	7,230	6,910	6,630	7,360	6,780	75,800			
Nevada	766,000	47,300	73,900	68,900	56,200	49,000	54,800	653,000			
Other States 4/	380,000	31,100	34,400	29,900	24,000	21,200	25,800	336,000			
Total	1,640,000	119,000	154,000	139,000	121,000	110,000	121,000	1,460,000			
	1996 p/										
	January	February	March	April	May	June	July	Jan July			
Arizona	14,900	16,500	13,100	14,700	15,200 r/	12,100 r/	14,600	101,000			
California	1,300	1,280	1,360	5,460	1,840	1,410	1,510	14,200			
Idaho	12,400	13,000	14,800	9,560 r/	14,900 r/	14,600 r/	13,900	93,200			
Missouri	3,110	3,070	3,620	3,980	2,930	W	W	W			
Montana	5,810	5,130	4,660	5,090	5,270	5,680	5,530	37,200			
Nevada	42,700	42,600	44,000	39,800	49,400	57,700 r/	60,200	336,000			
Other States 4/	27,700	23,000	26,800	25,700	26,100	34,500 r/	30,700	211,000			
Total	108,000	105,000	108,000	104,000 r/	116,000	126,000 r/	127,000	793,000			

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Other States."

^{1/} Data are rounded to three significant digits; may not add to totals shown.

^{2/} Includes annual reporters.

^{3/} Includes Alaska, Colorado, New Mexico, South Carolina, South Dakota, Utah, and Wisconsin.

 $^{4/\,}Includes\,Alaska,\,Colorado,\,Michigan,\,New\,Mexico,\,New\,York,\,South\,Carolina,\,South\,Dakota,\,Utah,\,Wisconsin,\,and\,data\,represented\,by\,symbol\,W.$

TABLE 2 SELECTED PRECIOUS METAL PRICES

(Dollars per troy ounce)

	Gold	Silver	Platinum	Palladium
Engelhard Industries:				
1995:				
Year:				
Low/date	373.68 (Jan. 09)	4.39 (Mar. 03)	404.00 (Mar. 02)	130.00
High/date	396.87 (Apr. 19)	6.02 (May 04)	462.00 (May 04)	179.00
Average	385.50	5.21	425.36	153.34
1996:				
June:				
Low/date	384.50/21	5.05/14	391.00/11	131.00
High/date	392.01/03	5.38/03	401.00/03	134.00
Average	386.58	5.14	393.45	133.00
July:				
Low/date	382.85/01	5.05/30	391.00/12	133.00
High/date	386.6/31	5.11/12	401.00/31	137.00
Average	384.99	5.14	393.45	133.00
August:				
Low/date	387.71/19	5.02/14	397.00/30	126.00
High/date	391.06/05	5.25/22	405.00/05	134.00
Average	388.71	5.12	400.77	128.82
Year to date:				
Low/date	382.85 (July 01)	5.05 (June 14) (July 30)	391.00 (June 11) (July 12)	128.00
High/date	416.16 (Feb. 05)	5.82 (Feb. 02)	433.00 (Feb. 05)	146.00
Average	394.05	5.34	405.72	135.37
Handy and Harman:				
1995:				
Average	384.22	5.19	XX	XX
1996:				
June	385.58	5.14	XX	XX
July	383.69	5.02	XX	XX
August	387.43	5.11	XX	XX
Year to date	392.77	5.33	XX	XX
London Final:				
1995:				
Average	384.16	5.22	XX	XX
1996:				
June	385.27	5.16	XX	XX
July	383.47	5.06	XX	XX
August	387.35	5.13	XX	XX
Year to date	392.66	5.35	XX	XX

XX Not applicable.

Source: Platt's Metals Week.

${\bf TABLE~3} \\ {\bf U.S.~IMPORTS~~AND~EXPORTS~OF~GOLD,~BY~COUNTRY~1/}$

(Kilograms of gold content, unless otherwise specified)

					Waste
	Ores and	Dore and	Refined		and scrap 4/
Country	concentrates 2/	precipitates	bullion 3/	Total	(gross weight)
Imports for consumption:	_				
1995:	_				
Year	5,020	9,820	111,000	126,000	14,400
1996:					
April	361	790	12,800	13,900	1,120
May	197	1,140	15,700	17,000	1,110
June:					
Brazil			917	917	
Canada	13	33	4,750	4,790	44
Chile			625	625	37
Colombia			1,340	1,340	3
Dominican Republic			42	42	303
Ecuador					22
Mexico		578	405	1,260	127
Other		24	871	895	417
Total	288	635	8,950	9,880	953
Year to date	1,860	5,270	68,000	75,100	6,430
Exports:					
1995:	_				
Year	345	69,700	277,000	347,000	74,700 5
1996:	_				<u> </u>
April	_ 3	2,940	90,600	93,500	9,550
May		2,730	69,400	72,200	7,700
June:	_			<u> </u>	
Canada		1,280	351	1,640	2,620
France					2,000
Germany			5	5	116
Japan			528	528	44
Korea, Republic of			5,200	5,200	
Switzerland		3,530	17,100	20,600	17
United Kingdom	_ 2	4,080	11,200	15,300	1,480
Other		2	2,540	2,540	390
Total	9	8,890	36,900	45,800	6,660
Year to date	- - 71	24,300	296,000	320,000	51,000

^{1/} Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

^{2/} Includes gold content of base metal ores, concentrates, and matte imported for refining.

^{3/}Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.

^{4/ &}quot;Waste and scrap" not included in "Total."

^{5/} All or part of these data have been referred to the Bureau of the Census for verification.

${\bf TABLE~4} \\ {\bf U.S.~IMPORTS~AND~EXPORTS~OF~SILVER,~BY~COUNTRY~1/}$

(Kilograms of silver content, unless otherwise specified)

	Ores and	Dore and	Refined		Waste and scrap 3/
Country	concentrates 2/	precipitates	bullion	Total	(gross weight)
Imports for consumption:	Concentrates 2/	precipitates	oumon	Total	(gross weight)
1995:	_				
Year	225,000	395,000	2,630,000	3,250,000	2,140,000
1996:		373,000	2,030,000	3,230,000	2,140,000
April	- 14,300	14,300	215,000	243,000	173,000
May	13,000	11,300	209,000	233,000	151,000
June:		,	,		
Canada	1,440		91,300	92,700	27,900
Chile		15,900	5,500	21,400	336
Dominican Republic	_	13,700	5,500	21,400	436
Germany					59,800
Japan					19
Malaysia					18,200
Mexico	18,600	199	59,600	78,400	351
Peru		199	32,000	32,000	331
Philippines Philippines			32,000	32,000	14,300
United Kingdom			16	 16	36,700
Other	_ -	 121	839	960	130
Total	20,000	16,200	189,000	226,000	158,000
Year to date	70,000	133,000	1,290,000	1,500,000	932,000
	70,000	155,000	1,290,000	1,300,000	932,000
Exports: 1995:	_				
Year	- 743	72,100	2,810,000 4/	2,880,000	1,580,000
1996:		/2,100	2,810,000 4/	2,880,000	1,580,000
	_	5,960	177,000	183,000	98,600
April May	- 60	5,960 657	222,000	223,000	98,600 157,000
		037	222,000	223,000	137,000
June: Belgium	_				27.200
Canada					27,300 29,700
	_ -				
China					6,820
France					2,680
Germany					247
Japan			422	422	9,370
Sweden					3,860
Switzerland		531		531	
United Arab Emirates	_		105,000	105,000	
United Kingdom		303	536,000	536,000	12,500
Other			1,670	1,670	663
Total		834	643,000	644,000	93,100
Year to date	521	27,900	1,260,000	1,290,000	732,000

 $^{1/\,\}mathrm{Data}$ are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

^{2/} Includes silver content of base metal ores, concentrates, and matte imported for refining.

^{3/ &}quot;Waste and scrap" not included in "Total."

 $^{4/\,\}text{All}$ or part of these data have been referred to the Bureau of the Census for verification.

TABLE 5 U.S. IMPORTS FOR CONSUMPTION AND EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY $1/\sqrt{100}$

(Kilograms of metal content, unless otherwise specified)

	Ores and	Waste and scrap			Refine	d		
Country	concentrates	(gross weight)	Platinum	Palladium	Rhodium	Iridium	Osmium	Ruthenium
Imports:		· · · · · · · · · · · · · · · · · · ·						
1995:								
Year	123	6,350	71,500 2/	124,000	9,600	1,450	69	7,520
1996:								
April		416	8,170	9,530	967	176		5,740
May	101	973	4,980	6,790	1170	55		576
June:								
Belgium			47	78				
Canada		22	34	344				
China				211				
Colombia			34					
Germany		1	322	159	13			
Japan		2		239	9			
Mexico								
Norway			11	203				
Russia			603	8,200	71			
South Africa			2,950	2,010	385	123		594
Switzerland			391	359		9		12
United Kingdom		75	627	1,090	50	125		21
Other		88	13	1,070	10	123		
Total		188	5,040	12,900	538	257		627
Year to date	101	2,650	35,300	53,600	4,710	940	311	10,300
Exports:		2,030	33,300	33,000	4,710	740	311	10,300
1995:								
Year	598	8,150	19,900	26,000	742	85 3/		
1996:		6,130	19,900	20,000	742	65 3/	=	
April	53	952	787	1,520	17	5 3/		
May	16	931	865	1,980	53	2 3/		
June:	10	931	803	1,980	33	2 3/		
		175	429	698				
Belgium		175		698 82				
Canada		17	33					
France			12	23				
Germany		12	168	42	17	1 3/		
Hong Kong				2				
Ireland				47				
Japan		124	31	366		1 3/		
Korea, Republic of			49	42				
Mexico			5	286		3 3/		
Netherlands			1	571				
Singapore			6	8				
Sweden		32	7	15				
Switzerland			3					
Taiwan			5	44				
United Kingdom		548	71	160				
Other	4		94	24		1	_	
Total	4	908	914	2,410	17	6 3/	=	
Year to date	172	3,790	7,030	12,100	137	41 3/	_	

^{1/} Data are rounded to three significant digits; may not add to totals shown. 2/ Of this amount 1,070 kilograms was in the form of platinum coins.

Source: Bureau of the Census.

^{3/} Includes osmium and ruthenium.